# PROMOTION OF QUALITY OF LIFE AMONG CHILDREN WITH CANCER AT SRI RAMAKRISHNA HOSPITAL, COIMBATORE.

**REG. NO. 30091411**

A Dissertation submitted to
**The Tamilnadu Dr. M.G.R. Medical University,**
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In partial fulfillment of the requirement for the
Award of the Degree of

**MASTER OF SCIENCE IN NURSING**

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# PROMOTION OF QUALITY OF LIFE AMONG CHILDREN WITH CANCER AT SRI RAMAKRISHNA HOSPITAL, COIMBATORE.


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# CONTENTS

# LIST OF TABLES

# LIST OF FIGURES

# LIST OF APPENDICES

# LIST OF ANNEXURE

# PROMOTION OF QUALITY OF LIFE AMONG CHILDREN WITH CANCER AT SRI RAMAKRISHNA HOSPITAL, COIMBATORE.

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# Abstract

An interventional study was conducted to assess the effectiveness of play therapy and activity based learning to promote quality of life of children with cancer. Quasi experimental one group pretest post test design was used to conduct the study. Sample of sixteen children were selected conveniently. Interventions were administered for a period of 24 days. Modified Pediatric Quality of Life Inventory (Varni, 2005) was administered before and after interventions. There was a significant difference in the quality of life before and after intervention. Play therapy and activity based learning was contributed in promoting the quality of life.

# Promotion of Quality of Life among Children with Cancer at Sri Ramakrishna Hospital, Coimbatore.

Cancer is a class of disease in which group of cells display uncontrolled growth, invasion and sometimes metastasis. Cancer affects people of all ages with the risk for most types increasing with age.

World wide, every year 10 million people are diagnosed with cancer and 6 million people die from cancer. In India every year 7 – 9 lakhs people are diagnosed with cancer and 3.5 – 4.5 lakhs people die from cancer (Park, 2009). The high prevalence of cancer is obviously shifting from developed nations to poorer, less medically equipped countries (WHO, 2007) and shows 5 year survival rates with advancements in treatment.

World wide, among all diseases, only 0.5% accounts for childhood cancers and cancer accounts for 20% of all deaths in children (Office for National Statistics, 2010). In India 1.6 to 4.8% of all cancer cases occur in children. Only 2% of the childhood deaths are reported to be cancer related deaths. Approximately 45,000 new cases of childhood cancers are detected annually in India (Arora, 2009). When diagnosed early enough and treatment is given, approximately 70% cancer are curable. With current treatments, approximately 75% of children diagnosed with cancer can expect to achieve a disease free survival.

Leukemia and malignant lymphomas are predominated in childhood cancers with a total of 50%. Modern strategies have raised the cure rates of Hodgkin's disease to 90%, Wilm's tumour and acute lymphoblastic leukemia and non Hodgkin's

lymphoma to 70%, soft tissue sarcomas and osteosarcomas to 50% and Acute Myeloid Leukemia to 30-35% (Schellog, 2004).

Childhood cancer survival rates have improved from 20% in the 1940s to 70 to 80 % currently (Science Daily, 2010). Most children and young adults diagnosed with cancer prior to 1970 had little hope of being cured. By 1997 cure rates as measured in 5 year survival had risen to 78 percent. Despite of the improved survival statistics, cancer remains a potentially life threatening condition, and as such imposes a major challenge to both child and family (Ries, 2002).

Even though, the long term survival of childhood cancer has improved because of treatments, the effect of cancer on the quality of life is not clear. It is purely subjective experience. Increasing emphasis is now being placed on examining health status or health related quality of life as a multidimensional, self perceived construct, which includes aspects such as physical activity, psychological adjustment, social reintegration and overall well being.

Quality of life in simple words means the extent to which the people's happiness requirements are met, that is those requirements are necessary for the happiness. The children who are affected with cancer can lead a quality life by care and support by nurses along with other health professionals, family members, peers etc.

For the child, quality of life is likely to be compromised by pain of illness and treatment, lack of energy to enjoy every day activities and fears about the future. During the course of treatment, most children experience unpleasant physical side effects, behavioural and emotional problems. Inability to attend school also is one of

the stressors on the child (Barakat, 2010). Quality of life of children are affected because of the impact of disease on school attendance and relationships with friends.

A child diagnosed with illness such as cancer, and is hospitalized for extensive periods of time can be engaged in play and other activities to improve his quality of life. A study conducted by Kasin et al., (2002) showed that, the child needs assistance with emotional support, meeting friends, practical support, rehabilitation and school support. School education in hospital after starting treatment help the children in attaining quality of life.

## 1.1. NEED FOR THE STUDY

The broad concept of quality of life incorporates a multiplicity of factors such as health, environment and community that influence a person's well being. Quality of life has become focus of increasing attention in medical practice because, it can be of great value in child care, both in terms of clinical outcomes and child satisfaction.

Each year newly diagnosed children with cancer are increasing. Thirty years ago few of these children were cured and issues relating to their education and overall quality of life were overshadowed by the need for improving medical treatment (Ries, 2002).

The diagnosis of cancer in a child imposes considerable stress on the whole family. The treatment is associated with many side effects depending on the specific drugs used. The child is prone to miss a lot of school and other activities. The children are receiving quality treatment from the institutions, but their quality of life is a

questionable one. The children are spending their days and months together in hospital beds.

Cancer does not affect the child alone but the whole family. To some extent those improvements in survival have been achieved by collaboration between clinicians, nurses and other health professionals (Eiser, 2005). The emotionally challenging life situation can bring on much emotionally distress and anxiety. Thus, it has become imperative that the child with cancer is assisted and supported, in his individual struggle to cope up with the harshness of his strained reality.

In the past years, there has been an increased interest in studying the health related quality of life in children with cancer. These studies suggest that health related quality of life in children during therapy is significantly lower than those who complete treatment.

Hospital teaching can serve as a bridge between treatment and school. The children's regular school programme should be collected and co-ordinated. Typically hospital teaching is limited to one hour per day, because more than this may be a challenge for the child. The nurse co-ordinator can act as a school teacher and may not cover every subject. Children feel a sense of normality in their lives (Katz, 2008).

Oncology nurses are engaged in a collaborative practice with all members of health care team to provide optimal care. The advanced practice of oncology nurse includes participants as principal investigator in health, serving as child care consultant and designing educational curriculum.

When the child is in hospital, his life can be brought to near normal with the provision of play therapy to improve his motor, cognitive and communication abilities and incorporation of activity based learning for keeping touch with school lessons. The contents of the education at 'in-hospital schools' are basically the same as those at regular schools. The 'in-hospital schools' can provide the children with individual and flexible educational programs, according to their needs, and given opportunities to try various activities within the restricted conditions. Studying develops a sense of self-efficiency in children and school activities will enhance the children's motivation to fight against their diseases (Katz, 2008).

Therapeutic play enables the children with cancer to cope with their diagnosis, treatment and hospitalization (Sharon, 1998). Need to play and feel joy was identified as one of the major needs of the hospitalized child with cancer (Bjork, 2006).

In Paediatric Oncology Ward of Sri Ramakrishna Hospital, the number of admissions from September 2008 to September 2009 were 164. Most of these children were between 3 years to 15 years of age. The duration of their hospitalization varies from 2 weeks to 1 ½ years. They spend their days in hospital beds without engaging in any productive activities. None of these children, after diagnosis had regular school attendance because of risks for infections, parental anxiety, repeated hospitalizations and ultimately school dropout. Activity based learning and play therapy along with treatment can aid in promoting the activities and abilities of children and thereby, it can promote the quality of life. Activity based learning can help the children to follow the school program during the days of absence from the school due to treatment. They are taught normal school curriculum, even though the

full syllabus is not completed. This can serve as a bridge to school lessons while in the hospital. The children in the ward are engaged in same patterns of plays every day. Plays can serve as the best media to express their inner feelings as it has therapeutic uses and also plays can improve socialization, communication, cognitive abilities, motor abilities and also aid in developing better mental abilities. So, the researcher felt the need to incorporate school lessons in the form of activity based learning and play therapy along with treatment, as an attempt to promote the quality of life of children with cancer.

## 1.2. STATEMENT OF THE PROBLEM

PROMOTION OF QUALITY OF LIFE AMONG CHILDREN WITH CANCER AT SRI RAMAKRISHNA HOSPITAL, COIMBATORE.

## 1.3. OBJECTIVES

1.3.1. Assessment of Quality of Life among Children in Paediatric Oncology Ward.

1.3.2. Provision of play therapy and activity based learning to children with cancer.

1.3.3. Reassessment of quality of life after intervention.

## 1.4. OPERATIONAL DEFINITIONS

### 1.4.1. Promotion

Improvement of quality of life of children with cancer from lower level to the maximum possible extent.

### 1.4.2. Quality of Life

Enhancing the self efficiency, motivation and overall well being of children with cancer in Paediatric Oncology Ward in terms of physiological functioning,

socialization, communication, self concept and role function through the provision of play therapy and activity based learning.

### 1.4.3. Children with Cancer

Children aged between 5 years to 18 years, who are diagnosed as cancer in Sri Ramakrishna Hospital, Coimbatore.

## 1.5. CONCEPTUAL FRAME WORK

Sister Callista Roy's theory of adaptation was chosen for the conceptual frame work for the study. Roy considered the recipient of care to be an open adaptive system. These systems can react and interact with other systems. It reacts as a whole. It mainly consists of three systems, that are input, throughput and output.

**(i) Input**

It is the stimuli, which comes from the environment or from within the person. It includes the ability of the person to adapt to a condition easily. Each person's adaptation level is unique and constantly changing. Here the researcher implement play therapy and activity based learning to improve cognitive abilities, motor abilities, socialization and communication.

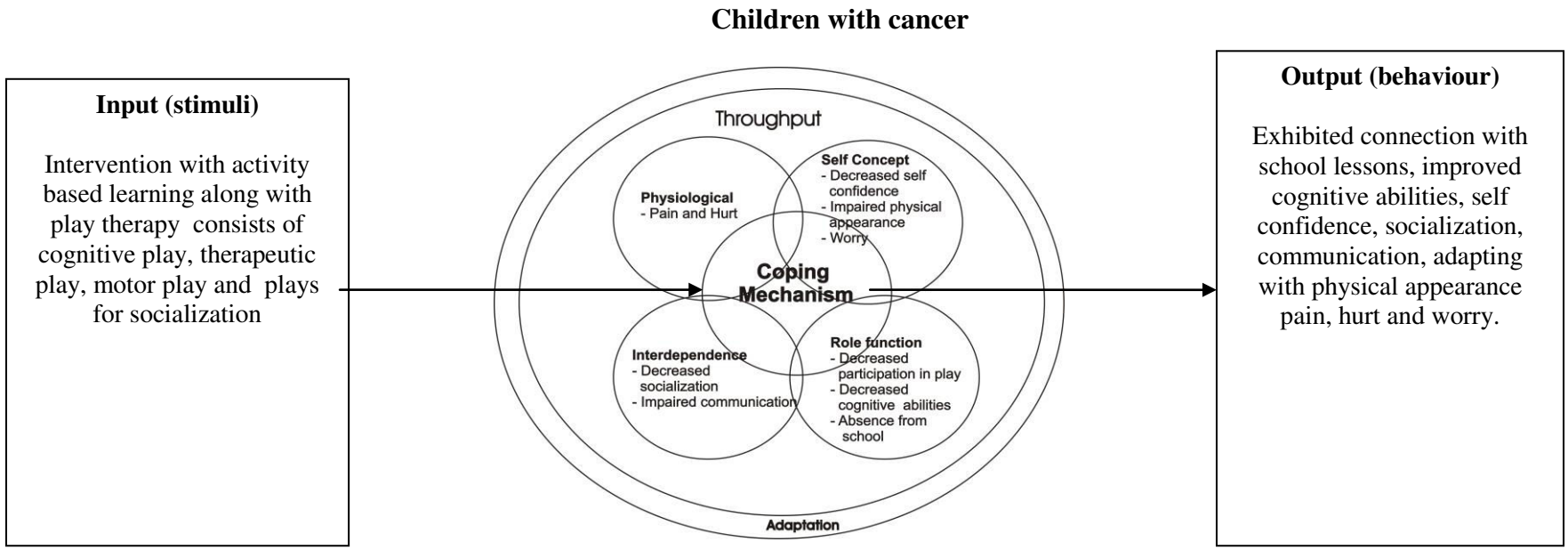
**(ii) Throughput**

It includes the person's control mechanisms, that a person uses as adaptive system and the physiologic response, self concept and role function. It includes the ability of the child to participate in play and perform simple tasks in terms of school lessons as given in activity based learning.

**(iii) Output**

Output is the outcome from a person. That includes the person's behaviours. The output is categorized as adaptive responses and ineffective responses. Adaptive responses are used when a person demonstrates behaviours that achieve the goals of survival, growth and mastery. The improved output is shown as improved socialization, communication, self confidence improved cognitive abilities, adjusting with physical appearance and coping with pain, hurt and worry after the provisions of play therapy and activity based learning. Activity based learning in hospital serves in filling the gaps between the long term hospitalization and school lessons.

**FIG. 1.1.**
**CONCEPTUAL FRAME WORK**




Ann Marriner Tomy (2007)

## 1.6. PROJECTED OUTCOME

Intervention with play therapy and activity based learning to children with cancer who are hospitalized for a long time for improving cognitive abilities motor abilities, socialization and communication, can serve as a driving force to improve the quality of life of children with cancer.

# REVIEW OF LITERATURE

The present chapter discusses literatures pertaining to the present study. An indepth literature survey was made under the following titles and presented below.

2.1. Literatures related to incidence of cancer

2.2. Literatures related to quality of life

2.3. Literatures related to play therapy and activity based learning

## 2.1. LITERATURES RELATED TO INCIDENCE OF CANCER

Globally, an estimated 12,400 children and adolescence under age 20 were diagnosed with cancer in 2002. New cases developing among children at a rate of 15.3% and risk of any individual child developing cancer between birth and 20 years of age is about 1 in 300.It is the third leading cause of death in children in 1 to 4 years of life and second leading cause in the age group 5 to 14 years (Institute of Medicine, 2003).

Each year, more than 12,500 children are diagnosed with cancer globally and every school day, two classmates of students are diagnosed with cancer. One child out of 5 diagnosed with cancer dies. Three out of 5 children suffer from long term side effects. Cancer is cutting short the lives of more children under the age of 20 than any other diseases. The average age of a child diagnosed with cancer is 6 years (Cure Search, 2008).

A descriptive study conducted on childhood cancers in Chennai, India; with children of age group between 1 to 14 years showed that, the top 5 childhood cancers were same among boys and girls; leukemias, lymphomas, central nervous system neoplasms, retinoblastoma and renal tumours (Swaminathan, 2008).

A cross sectional study was conducted across various parts of India to assess the epidemiology of childhood cancer in India revealed that 1.6 to 4.8% of all cancer in India is seen in children below 15 years of age and the overall incidence of 38 to 124 million children, per year is lower than that in the developed countries. It showed increased incidence of Hodgkin's disease in males, lower incidence of central nervous system tumours and higher incidence of retinoblastoma (Arora & Kapoor, 2009).

A descriptive study was conducted in South India to assess the under diagnosis and under ascertainment of cases may be reasons for low childhood cancer incidence in rural India with a coverage of 2 million people showed that childhood cancer incidence is lesser in rural than urban India. This is due to under diagnosis. It reflected implicity by method variation in incidence between different populations of India. Highest cancer incidence in metropolitan areas (108 per million), followed by urban (86 per million) and rural (53 per million) (Swaminathan, 2010).

## 2.2. LITERATURES RELATED TO QUALITY OF LIFE

A study was conducted with 25 children to assess the important aspects of care and assistance for children with cancers aged between 8 to 12 years. The study revealed the following as the important aspects of care and assistance; emotional support, family life, meeting friends, practical support, rehabilitation and school support (Essen, 2000).

A quasi experimental study was conducted to assess the quality of life of children with cancer at diagnosis and during therapy. Thirty children with cancer participated in the study. The play performance of the children also was assessed. The study showed almost all the children (96.7%) suffered from a deficit of one or more attribute. The type of cancer did not seem to have important effect on health related quality of life except brain tumour. Intensive chemotherapy and hospitalization had negative effect on quality of life. The quality of life was better at third month of therapy than diagnosis (Yaris, et al., 2001).

A descriptive study was conducted in Belgium on the quality of life in children surviving cancer with 67 children showed that children survived cancer reported higher quality of life than healthy children, where as there were no differences for personality. Parental personality ratings explained child quality of life beyond children's personality traits. Personality traits contribute to quality of life beyond the experience of a negative life event such as surviving cancer and its treatment (Clerq, Fruyt & Koot, 2004).

A study was conducted on health related quality of life assessment in Indonesian children with acute lymphoblastic leukemia with ninety eight guardians and 55 children showed guardians reported worse health related quality of life than children. In the non-intensive phase, health related quality of life was significantly better than in the intensive phase, both in children's self reports and parent's report. The study showed that younger children had more problems in procedural anxiety, treatment anxiety and communication problems. Psychological support should be

provided to children and their parents to facilitate their coping with disease and treatment (Sitaresmi, Moastert & Gundyt, 2005).

A study was conducted to assess the quality of life in children newly diagnosed with cancer and their mothers in United Kingdom with 87 samples aged between 2 years to 18 years; revealed that complex and aggressive treatments are potentially compromising quality of life of children and their parents. Mothers reported their own child's quality of life is significantly lower than others. There were significant correlations between mother's ratings and children's ratings. Efforts must continue to be made to improve quality of life of children especially in the period immediately following diagnosis (Eiser & Stride, 2005).

A study was conducted in Taiwan to evaluate the quality of life in children with cancer using children's self reports and parent's reports with 126 children and parents revealed that, parents reported better quality of life than children. The study showed that age, gender, and severity of illness had affected various subscales like cognitive and social domains in quality of life (Yeh & Chao, 2005).

A descriptive study was conducted in Switzerland to assess the health related quality of life in children with newly diagnosed cancer with 52 children between 6 to 15 years revealed that, parents reported more physical complaints, reduced motor functioning and impaired emotional functioning when newly diagnosed with cancer. Children with leukemia were affected with more physical complaints after six weeks of diagnosis. Children with brain tumours complained about more physical symptoms than other groups (Landolt, Vollrath & Gnehm, 2006).

A descriptive study was conducted in Tennessee to assess the quality of life of adolescents with cancer- family risks and resources, to evaluate the family resources to health related quality of life of 102 adolescents in treatment for cancer showed the significant contribution of role in family functioning and quality of parent-child relationship in prediction of psychosocial quality of life. Family socio demographic data did not contribute for quality of life. This study showed quality of parent-child correlations for all scales and the correlations were higher in cancer groups. Parents of the experimental group tended to under estimate the quality of life of their children. Parents and children tend to report comparatively child high quality of life outcomes (Kathyrn, 2006).

A study was conducted for the assessment of health related quality of life among school children with cancer in Alexandria, in terms of physical, emotional and social functions with 215 students for a period of one month showed lymphoma was the most common tumour (34.9%), followed by leukemia (24.2%), brain tumour (13%), osteosarcoma (7.9%) and Wilm's tumour (7%). The result showed poor quality of life was more likely among students of younger age. The health related quality of life measurement should be done as a routine for all children with cancer in order to identify specific therapies that require modification in management (Mounir, 2007).

A prospective follow up study was conducted in Netherlands to assess the quality of life in children – three and nine months after discharge from paediatric intensive care unit, with 21 children aged between 1 year to 15 years. The result showed that poor motor functioning for older children. The study showed improved quality of life over time. The study suggested more assessments on health related

quality of life and the findings of the assessments should be incorporated with follow-up services and programs (Knoester, 2008).

A study conducted on health related quality of life among children with cancer in Hyderabad, India with 45 children and their physicians, most of the children had acute lymphoblastic leukemia. There were no differences in patterns observed between cancer types for the child's health related quality of life, but there was wide variation in the total health related quality of life scores among the children. This variation was more evident in certain aspects of children's life such as emotion and pain (Chirivella, 2009).

A cross sectional study was conducted in Philadelphia to asses the quality of life of adolescents with cancer with 102 adolescents in treatments for cancer showed the significant contribution of roles in family functioning and quality of parents child relationship in prediction of psychosocial quality of life. Family socio-demographic data did not contribute for quality of life. This study showed quality of parent-child relation affects quality of life of these children (Barakat, Marmar & Schwatz, 2010).

## 2.3. LITERATURES RELATED TO PLAY THERAPY AND ACTIVITY BASED LEARNING

A quasi experimental study was conducted in Texas to assess the psychological impact of play on hospitalized children showed that children provided with therapeutic play evidenced significant reduction in self reported hospital fears and children were less anxious (Rae, 2001).

Art therapy has been used with a variety of pediatric medical population, including cancer. This allows the young children to communicate perceptions and needs. Participating in creative arts within the medical setting can help rebuild the young child sense of hope, self esteem, autonomy and competence while offering opportunities for safe and contained expression of feelings (Council, 2003).

A qualitative study was conducted in Sweden to assess the communication via expressive arts: The natural medium of self expression for hospitalized children. Twenty two children were provided with clay, paint and other materials for art. The study showed that children use to express their feelings through art. It mirrors their thoughts and feelings of being hospitalized. The study also showed that expressive arts were a medium for communication. Expressive arts should be used as a tool to help the child to express her/himself when being hospitalized (Wickstrom, 2005).

An experimental study was conducted in Iran to assess the effect of group play on depression in 24 children with cancer aged 6 to 15 years old, with 2 hour sessions for 7 days showed play therapy led to significant improvement of depression and an effective intervention for children with cancer. Play therapy can be an effective intervention to help the hospitalized children in order to prepare them for painful therapeutic procedures and stress of hospitalization (Zareapour, Khoshknab & Kashaninia, 2009).

A qualitative study was conducted in South Africa to assess the effect of gestalt play therapy on feelings of anxiety experienced by the hospitalized oncology child with 6 samples between 9 to 14 years. The study showed that it has become imperative that the oncology child is assisted and supported, in his individual struggle

to cope with the harshness of his strained reality. In this study the hospitalized oncology child was provided with a means of support and intervention through the use of gestalt play therapy. The study concluded that play therapy helped the children to express anxiety and emotional distress (Melany, 2009).

A descriptive study was conducted to assess the perceived physical appearance and adjustment of children with newly diagnosed cancer, showed children with cancer who experience disease and treatment related changes in physical appearance are in a greater risk for psychological and social adjustment problems. It showed perceived physical appearance has direct and indirect effects on depressive symptoms and social anxiety (Varni, Katz & Dolgin, 2005).

A descriptive study was conducted in Greece on a novel idea for an organized hospital school program for children with malignancies, showed that this program would help the children to follow the school program during the days of absence from school due to treatment. This would also help these children in attending regular school and social life after discharge (Kapelaki, et al, 2003).

In activity based learning, a Tamil Nadu literature, which has drawn upon several resources, which can succeed in keeping children motivated and fully occupied. It provides the learning material for several children to be working on. Child learns in a self directed way, from the systematic materials provided with the guidance of teacher or even a parent in the absence of teachers. It recreates the family model, where the older child automatically becomes a guide and helper for younger one. It encourages cooperation between children. The children above fourth standard

can be encouraged to learn by the provision of reading materials, story writing and basics to grammar (Anandalakshmi, 2007).

In ‘in-hospital schools’, the hospital teacher arranges regular teaching times that accommodate the child’s medical needs and hospital schedule. Typically hospital teaching is limited to one hour per day. Since experience shows that focusing on school work for longer than one hour can be a challenge for the child. This teaching program may not cover all subjects (Katz, 2008).

The children in the cancer ward of Central Hospital in Namibia, attends classes in each morning by a hospital teacher in hospital itself. The schooling programme for the children with cancer are not mixed with that of other hospitalized children, because they have less immunity and more chances of infection. They are taught normal school curriculum, so that they do not miss too much schooling (Bause, 2010).

# METHODOLOGY

The present study was designed for the promotion of quality of life of children with cancer. The methodology of the present study includes research design, setting, population, criteria for sample selection, sampling technique, variables of the study, materials for data collection, validity of the tool, hypothesis, reports of pilot study and main study and technique of data analysis and interpretation.

## 3.1. RESEARCH DESIGN

Quasi Experimental One Group Pretest -Post Test Design was adopted for the study.

## 3.2. SETTING

Paediatric Oncology Ward of Sri Ramakrishna Hospital, Coimbatore, Tamil Nadu where the study was conducted, has an oncology unit with the bed strength of 150, with 98 beds in general ward. In that 28 beds are exclusively for children and the bed occupancy is 100%.

## 3.3. POPULATION

The population for the present study was children ranged from 5 to 18 years who were diagnosed as cancer and admitted in Oncology Ward of Sri Ramakrishna Hospital, Coimbatore for various treatments.

## 3.4. CRITERIA FOR SAMPLE SELECTION

### 3.4.1. Inclusion Criteria

1. Children who are aged between 5 years to 18 years.
2. Children who are admitted in General Oncology Ward.

### 3.4.2. Exclusion Criteria

1. Children who are terminally ill.

## 3.5. SAMPLING TECHNIQUE

Convenient sample of 16 children with various types of cancer aged between 5-18 years were selected for the study.

## 3.6. VARIABLES OF THE STUDY

### 3.6.1. Dependent Variable

Quality of life among children with cancer.

### 3.6.2. Independent Variable

Intervention with play therapy and activity based learning.

## 3.7. MATERIALS

### 3.7.1. Demographic data profile

### 3.7.2. Modified Paediatric Quality of Life inventory (child report)

The paediatric cancer quality of life inventory has been developed to be a standardized assessment instrument to assess systematically paediatric cancer child's health related quality of life outcomes. The scale was developed by James W Varni, et al., 2005) and it was modified for the study.

### 3.7.3. Modified paediatric quality of life inventory (parent report)

The paediatric cancer quality of life inventory has been developed to be a standardized assessment instrument to assess systematically paediatric cancer child's health related quality of life outcomes. The scale was developed by James W Varni, et al., 2005) and it was modified for the study.

Higher scores indicates poor quality of life.

3.7.4. Module for play therapy for improving socialization, communication, cognitive abilities & motor abilities

3.7.5. Module for activity based learning to serve as a bridge between school lessons and hospitalization

The above mentioned interventions are presented in detail in the Appendix – III.

**Administration of tools**

The quality of life inventory questionnaire was used to get the responses from children and their mothers before and after intervention. Play therapy and activity based learning was given to children according to their age group.

## 3.8. VALIDITY OF THE TOOLS

The construct validity of the Pediatic Quality of Life Parent and Child Module was determined by comparing scores obtained by the parents or guardians from the in patient and out patient samples. The effect size ranged from medium to large for all of the subscales except cognitive functioning and daily activities. Test –retest reliability exhibited correlation values ranging from 0.81 to 0.96 for all subscales. Internal consistency reliability was demonstrated for the PedsQl. Total score ($\alpha$=0.89), parent health related quality of the summary score ($\alpha$=0.83). The module proved capable of distinguishing between families whose children were hospitalized.

### 3.9. HYPOTHESIS

There is a significant difference in the quality of life before and after play therapy and activity based learning among children with cancer.

### 3.10. PILOT STUDY

Pilot study was conducted to find out the feasibility and practicability of the study. Pilot study was conducted at the Oncology Ward of Sri Ramakrishna Hospital for ten days with 13 samples. The data was collected from participants using the modified paediatric quality of life inventory. Play therapy and activity based learning was administered to the children according to the age group. The questionnaire was re-administered after intervention. The results revealed that there is a significant improvement in the quality of life after the intervention.

### 3.11. MAIN STUDY

The main study was conducted to meet the objectives of the present study. Children who satisfied the inclusion criteria were selected for the study. The baseline data were obtained from records of the children. The quality of life of children with cancer was assessed prior to the intervention. The quality of life was again assessed after intervention i.e., play therapy and activity based learning.

### 3.12. TECHNIQUES OF DATA ANALYSES AND INTERPRETATION

Descriptive and inferential statistics (paired ‘t’ test) was used to test the hypothesis.

# DATA ANALYSIS AND INTERPRETATION

This chapter represents the method of analysis and interpretation of data. Play therapy and activity based learning was administered to children with cancer.

The study was intended to promote quality of life among children with cancer by administration of play therapy and activity based learning. The data was collected from 16 samples. The findings were tabulated, analyzed and interpreted in this chapter. The data was computed using descriptive and inferential statistics.

## 4.1. DISTRIBUTION OF DEMOGRAPHIC DATA

The demographic data consists of age, sex, education, education of father & mother and family income. The data collected are presented in the form of tables and graphs.

**TABLE 4.1.**
**DISTRIBUTION OF DEMOGRAPHIC DATA OF CHILDREN**

**(N=16)**

| Demographic Data | No. of children | Percentage (%) |
|---|---|---|
| Age (in years) | | |
| Preschoolers (5-6 ) | 2 | 12 |
| School age (6-12) | 5 | 31 |
| Adolescence (12-18) | 9 | 57 |
| Sex | | |
| Boys | 10 | 62 |
| Girls | 6 | 38 |

The age distribution of children shows that 57% of children belong to adolescence group and 12% of children belong to preschoolers. 62% of children were boys and 38% were girls.

**FIG. 4.1.**
**DISTRIBUTION OF AGE**

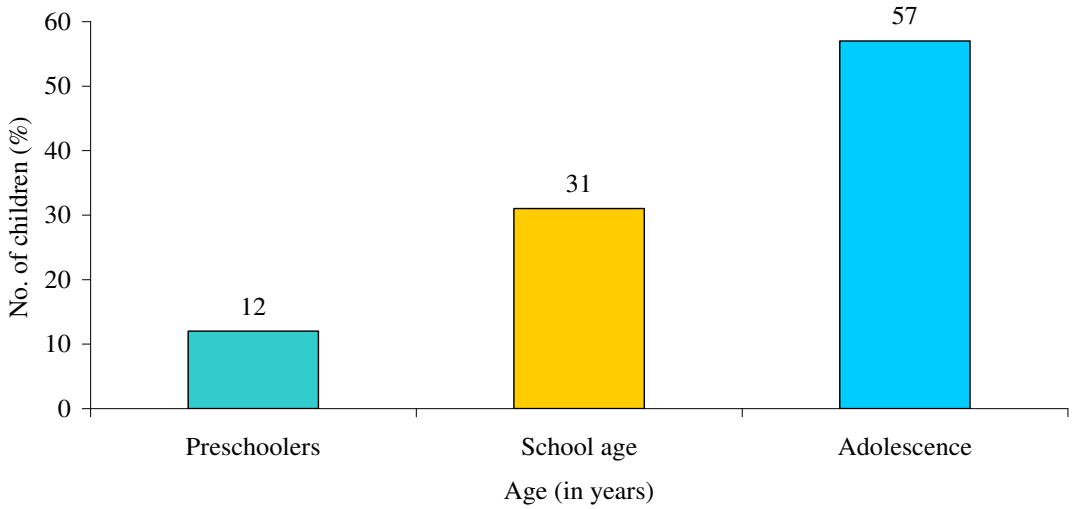



**FIG. 4.2.**
**DISTRIBUTION OF SEX**

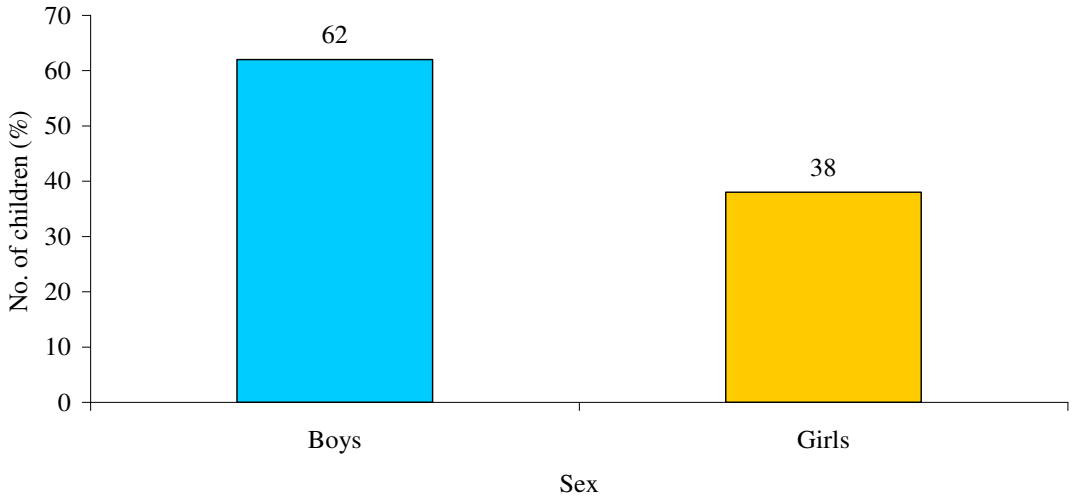


**TABLE 4.2.**
**DISTRIBUTION OF EDUCATIONAL STATUS OF CHILDREN**

**(N=16)**

| Educational status | No. of children | Percentage (%) |
|---|---|---|
| Standard last studied | | |
| Kindergarten | 2 | 12 |
| Primary | 3 | 19 |
| Secondary | 11 | 69 |
| Medium of instruction | | |
| Tamil | 15 | 94 |
| English | 1 | 6 |
| School Attendance | | |
| Leave | 9 | 57 |
| Drop out | 7 | 43 |

The above table shows that 69 % of children had secondary education and 12% were in kindergarten.

Majority (94%) had Tamil as their medium of instruction and 6% had English as their medium 43% children were school dropouts and 57% were on leave.

**FIG. 4.3.**
**DISTRIBUTION OF EDUCATION**

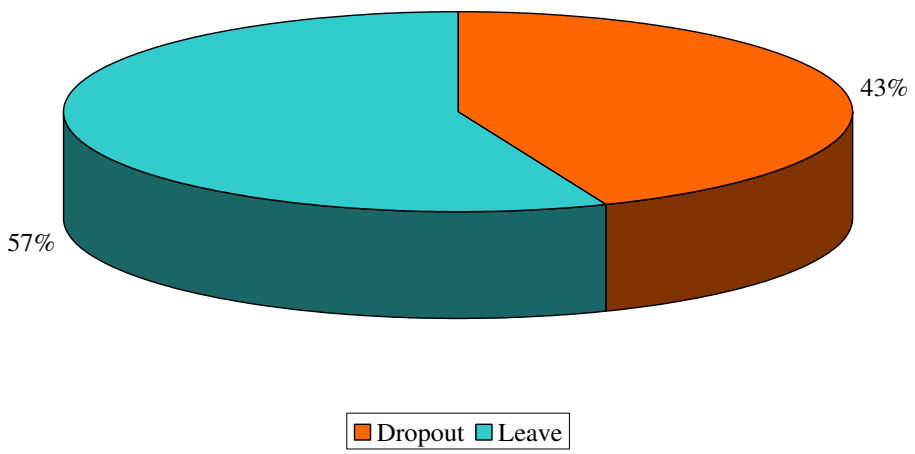


**TABLE 4.3.**
**DISTRIBUTION OF NUTRITIONAL STATUS**

**(N=16)**

| Degree of malnutrition | No. of children | Percentage (%) |
|---|---|---|
| I degree | 6 | 38 |
| II degree | 4 | 25 |
| III degree | 4 | 25 |
| Normal | 2 | 12 |

The above table shows 38% children had first degree malnutrition, 25% of children had second and third degree malnutrition and 12% children were normal according to Gomez Classification.

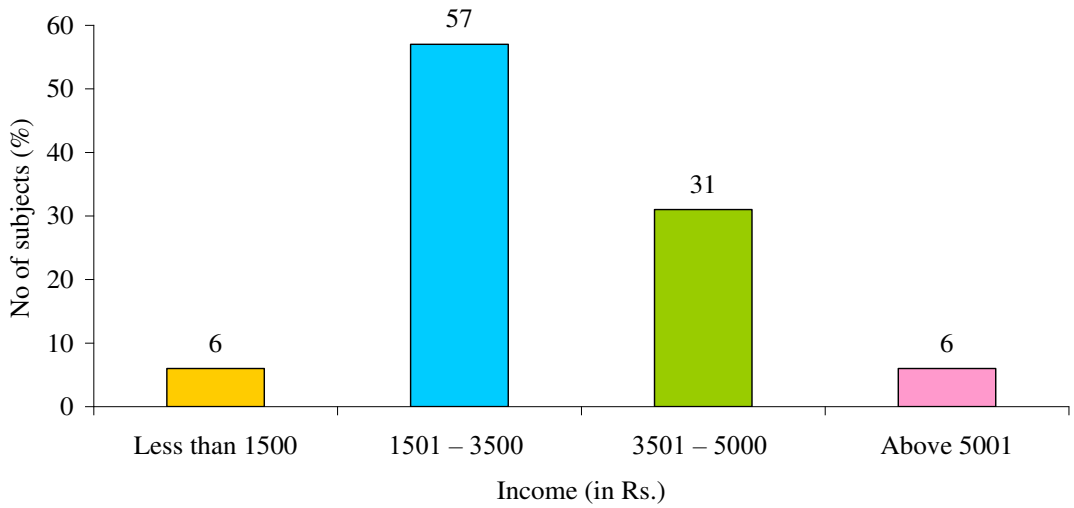
**TABLE 4.4.**
**DISTRIBUTION ON DEMOGRAPHIC DATA OF PARENTS**

**(N=16)**

| Demographic Data | No. of respondents | Percentage (%) |
|---|---|---|
| Father | | |
| Illiterate | 3 | 19 |
| Primary | 3 | 19 |
| Secondary | 6 | 38 |
| Higher secondary | 2 | 12 |
| Graduate | 1 | 6 |
| Mother | | |
| Illiterate | 5 | 31 |
| Primary | 3 | 19 |
| Secondary | 6 | 38 |
| Higher secondary | 1 | 6 |
| Graduate | 1 | 6 |
| Occupation | | |
| Father | | |
| Coolie | 6 | 38 |
| Company worker | 3 | 19 |
| Driver | 1 | 6 |
| Business | 2 | 12 |
| Others | 3 | 19 |
| Mother | | |
| House wife | 10 | 63 |
| Coolie | 4 | 25 |
| Mill workers | 1 | 6 |
| Others | 1 | 6 |
| Family Income per month (in Rs.) | | |
| Less than 1500 | 1 | 6 |
| 1501 – 3500 | 9 | 57 |
| 3501 – 5000 | 5 | 31 |
| Above 5001 | 1 | 6 |

19% of the fathers were illiterate and 31% of mothers were illiterate. 38% of the fathers of children were coolie and 63% of mothers were house wives. Majority (57%) had a family income between Rs.1501 – 3500 per month.

**FIG. 4.4.**
**DISTRIBUTION OF INCOME**



## SECTION – II

### 4.2. DISTRIBUTION OF HISTORY OF PRESENT ILLNESS

The table shows the diagnosis, duration of illness and the treatments.

**TABLE 4.5.**
**DISTRIBUTION OF HISTORY OF PRESENT ILLNESS**

**(N=16)**

| | No. of children | Percentage (%) |
|---|---|---|
| Diagnosis | | |
| Acute Lymphoblastic leukemia | 13 | 82 |
| Acute myeloid leukemia | 1 | 6 |
| Medullo epithelioma | 1 | 6 |
| Osteosarcoma | 1 | 6 |
| Duration of illness | | |
| Less than 6 months | 2 | 12 |
| 6 months to 12 months | 8 | 50 |
| 12 months – 36 months | 6 | 38 |
| Duration of hospitalization | | |
| Less than 6 months | 6 | 38 |
| 6 months – 12 months | 10 | 62 |
| Treatment | | |
| Chemotherapy and Radiation therapy | 9 | 57 |
| Chemotherapy alone | 7 | 43 |

The above table shows that the majority of the children were cases of acute lymphoblastic leukemia that is 82% and 6% of children were cases of acute myeolocytic leukemia, medullo epithelioma and osteosarcoma. 50% of the children were diagnosed to have cancer and were admitted for 6 months to 1 year and 12% of children were for less than 6 months. 62% of children admitted for more than six months. 57% of children were on treatment with chemotherapy and radiation therapy and 43% of children were on treatment with chemotherapy alone.

**FIG. 4.5.**
**DISTRIBUTION OF DIAGNOSIS**

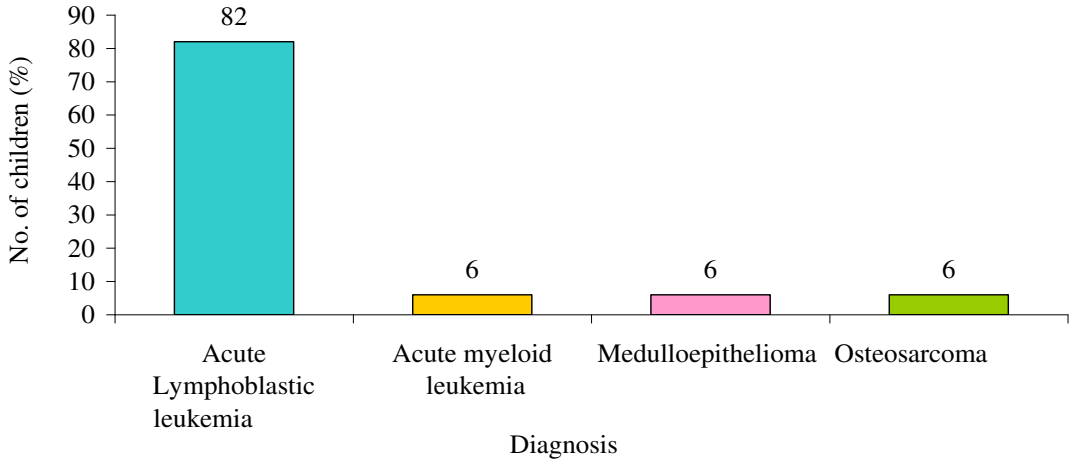



**FIG. 4.6.**
**DISTRIBUTION ON DURATION OF ILLNESS**

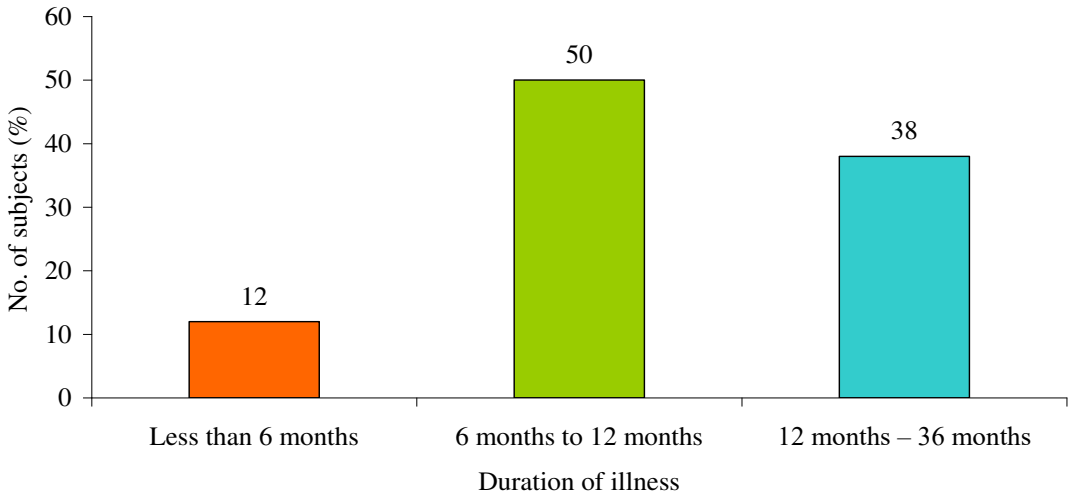


**FIG. 4.7.**
**DISTRIBUTION OF TREATMENT**

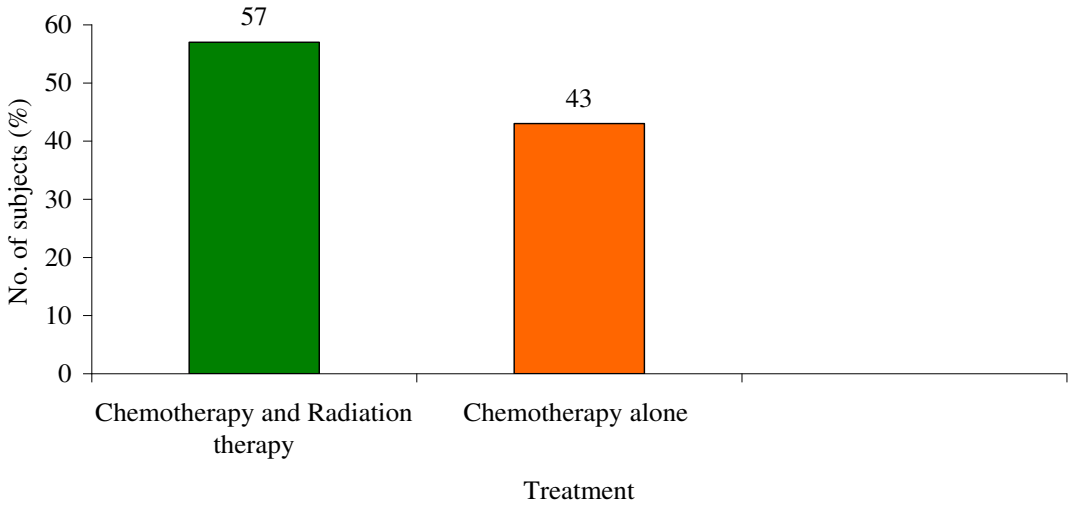


**TABLE 4.6.**

**INTERPRETATION OF SCORES ON QUALITY OF LIFE**

| | Before intervention | | After intervention | |
|---|---|---|---|---|
| | Number of children | Percentage (%) | Number of children | Percentage (%) |
| Child report | | | | |
| Good | 10 | 62 | 15 | 94 |
| Substantial | 3 | 19 | - | - |
| Average | 3 | 19 | - | - |
| Discrete | - | - | 1 | 6 |
| Poor | - | - | - | - |
| Parent report | | | | |
| Good | 9 | 57 | 14 | 88 |
| Substantial | 5 | 31 | 1 | 6 |
| Average | 1 | 6 | - | - |
| Discrete | 1 | 6 | 1 | 6 |
| Poor | - | - | - | - |

The above table shows the scores of child report and parent report before and after intervention with play therapy and activity based learning.

Before therapy, 62% of children reported good quality of life and 19% children had substantial and average quality of life while 57% of parents reported good quality of life and 6% of parents reported average and discrete quality of life for their children.

After therapy, 94% of children reported good quality of life and 6% of children reported discrete quality of life. 88% parents reported good quality of life and 6% of parents reported substantial and discrete quality of life for their children.

**FIG. 4.8.**
**COMPARISON ON THE SCORES BEFORE AND AFTER THERAPY - CHILD REPORT**

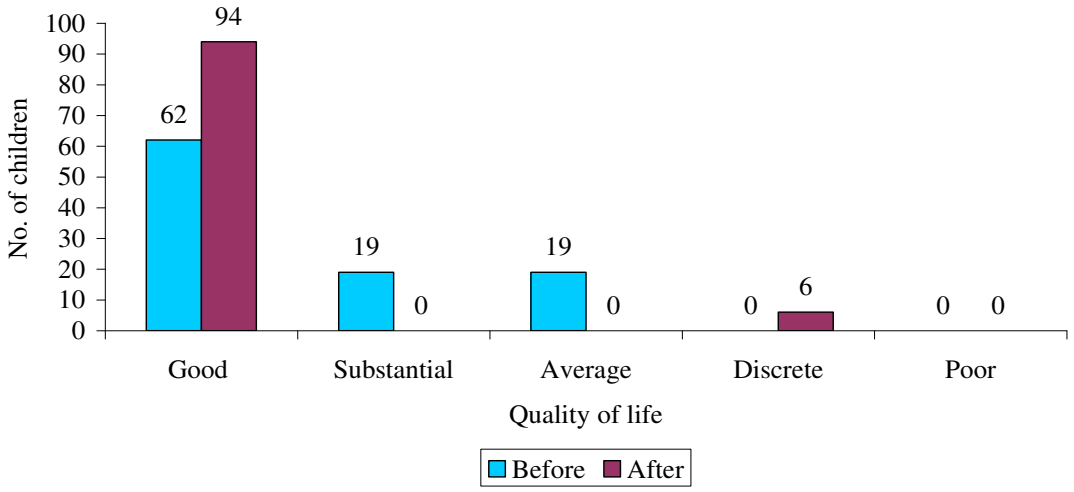



**FIG. 4.9.**
**COMPARISON ON THE SCORES BEFORE AND AFTER THERAPY - PARENT REPORT**

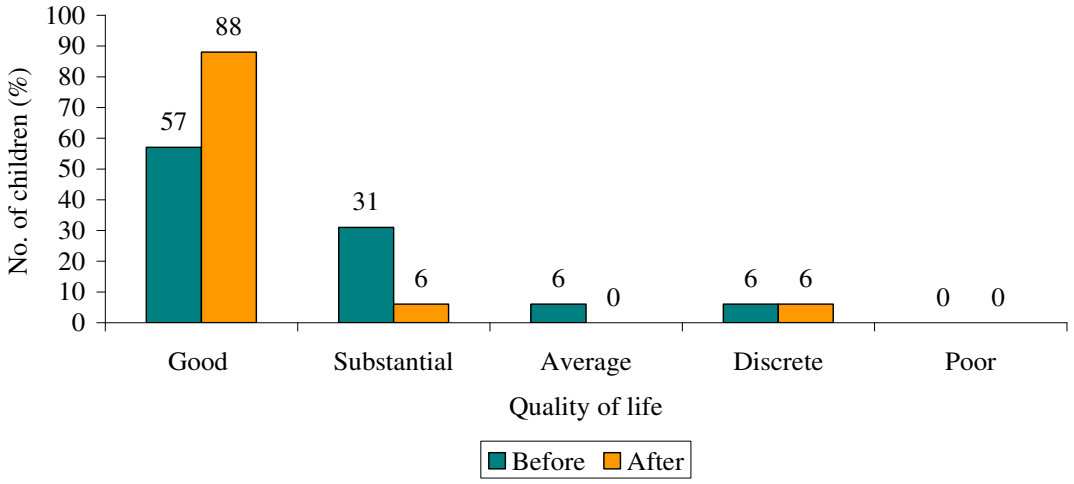


**TABLE 4.7.**
**ANALYSIS OF QUALITY OF LIFE BEFORE AND AFTER THE INTERVENTION – CHILD REPORT**

| | Mean | Mean percentage | SD | Mean difference | 't' |
|---|---|---|---|---|---|
| Before | 25.625 | 20.665 | 17.8 | 9 | **2.852**** |
| After | 16.625 | 13.40 | 19.64 | | |

** Significant at 0 .05 level

The above table shows the comparison on the quality of life before and after intervention with play therapy and activity based learning. After the intervention, the mean score decreased from 25.625 to 16.625. The differences in the mean total score were statistically analyzed using paired 't' test.

The calculated 't' value of child report was greater than the table value at 0.05 level of significance. This reveals that a significant difference exist between the mean scores before and after interventions. Thus, the difference is statistically significant and it confirms that interventions with play therapy and activity based learning are effective in improving the quality of life of children with cancer.

**TABLE 4.8.**
**ANALYSIS OF QUALITY OF LIFE BEFORE AND AFTER THE INTERVENTION –PARENT REPORT**

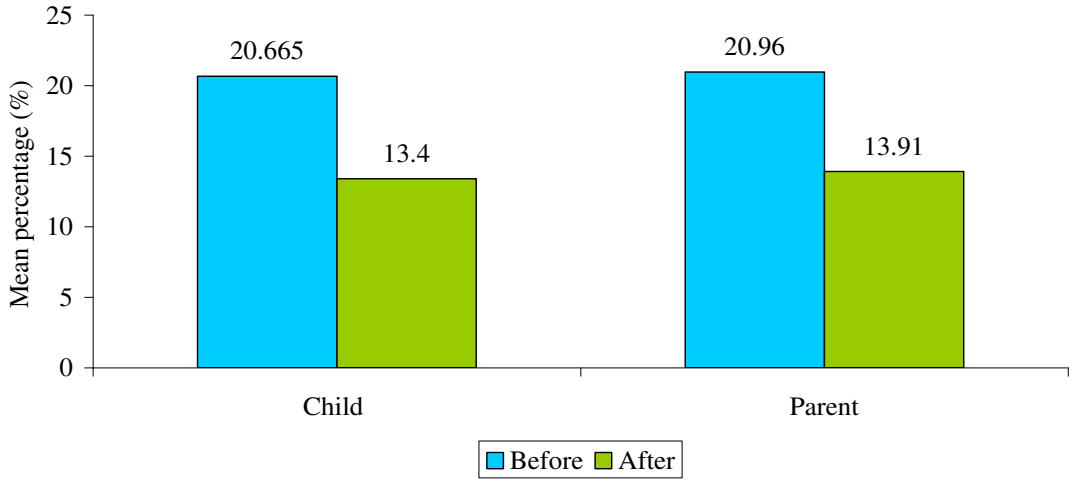
| | Mean | Mean percentage | SD | Mean difference | 't' |
|---|---|---|---|---|---|
| Before | 26 | 20.96 | 22.114 | 8.75 | **5.36**** |
| After | 17.25 | 13.91 | 19.97 | | |

** Significant at 0.01 level

The above table show the comparison on the quality of life before and after intervention with play therapy and activity based learning. After the intervention, the mean score decreased from 26 to 17.25 as per the parent report. The differences in the mean total score were statistically analyzed by using paired t test.

The calculated 't' value of parent report was greater than the table value at 0.01 level of significance. So, the hypothesis is accepted. This reveals that a significant difference exist between the mean scores before and after interventions. Thus, the difference is statistically significant and it confirms that interventions with play therapy and activity based learning are effective in improving the quality of life of children with cancer.

**FIG. 4.10.**
**ANALYSIS OF QUALITY OF LIFE BEFORE AND AFTER THE INTERVENTION**



# RESULTS AND DISCUSSION

The study was conducted in pediatric Oncology Ward of Sri Ramakrishna Hospital, Coimbatore. The main focus of the study was to promote the quality of life of children with cancer. Modified Paediatric Quality of Life Inventory (Child and Parent report) was administered before and after intervention. Play therapy and activity based learning was administered as intervention.

## 5.1. FINDINGS RELATED TO DEMOGRAPHIC DATA

### 5.1.1. Age

In relation to age distribution majority of children 9 (57%) were in adolescent group. The findings are similar to the statistics by Dani's Foundation, 2008 that 36 children in adolescent group are diagnosed with cancer every day in United States.

### 5.1.2. Sex

Among 16 children, 10 (62%) were boys and 6 (38%) were girls. This is similar to the findings of a study conducted by Arora & Kapoor (2009) that overall incidence in childhood cancer is more common among males (39-150 million/year) than females (23-97 million/year).

### 5.1.3. Educational status

Among 16 children, 9 (57%) were on leave and 7 (43%) were dropouts.

Among 16 children, 11 (69%) children had secondary education, 3 (19%) had primary education and 2 (12%) were in kindergarten.

### 5.1.4. Nutritional status

When analysed the nutritional status 6 (38%) children had first degree malnutrition. 4 (25%) children had second and third degree malnutrition respectively and 2 (12%) children showed normal nutritional status.

### 5.1.5. Demographic data of parents

Out of 16 parents, 3 (19%) fathers and 5 (31%) mothers were illiterate, 6 (38%) fathers were coolie and 10 (63%) mothers were housewives. Majority 9 (57%) had a family income between Rs. 1501-3500 per month.

## 5.2. FINDINGS RELATED TO HISTORY OF PRESENT ILLNESS

Majority 13 (82%) of the children were cases of acute lymphoblastic leukemia, 1 (6%) child was a case of acute myeolocytic leukemia, 1 (6%) medullo epithelioma and 1 (6%) was a case of osteosarcoma. The findings of type of cancer goes in line with a study conducted by Chirivella (2009) that acute lymphoblastic leukemia accounts for most of the childhood cancers and 60-85% of childhood cancers are acute lymphoblastic leukemia (Arora & Kapoor, 2009). Out of 16 children, 8 (50%) of the children were admitted for 6 months to 12 months and 2 (12%) of children were for less than 6 months. Out of 16 children, 9 (57%) children were on treatment with radiation and chemotherapy and 7 (43%) children were on treatment with chemotherapy alone.

## 5.3. FINDINGS RELATED TO QUALITY OF LIFE

Before therapy 10 (62%) of children reported good quality of life and 3 (19%) children had substantial and average quality of life while 9 (57%) mothers reported good quality of life 5 (31%) mothers reported substantial, 1 (6%) mother reported

average and 1 (6%) mother reported discrete quality of life for their children according to the criteria of paediatric quality of life inventory. After therapy, 15 (94%) children reported good quality of life and 1(6%) child reported discrete quality of life while 14 (88%) mothers reported good quality of life and 1 (6%) mother reported substantial and discrete quality of life for their children.

## 5.4. DISCUSSION

On analysing the main findings of the study it shows that the intervention was found to be effective. Hence, the 't' values obtained for child was 2.85 which is significant at 0.05 level, and parent was 5.36 which is significant at 0.01 level.

No such interventional studies are found so far to substantiate the present findings, there are some supportive literatures evidenced that children suffered from deficit of play (Yaris, 2001) communication (Sitaresmi, 2005)cognitive and social domains (Yeh, 2005) motor functioning and emotional functioning (Landolt, 2006), school performance and need emotional support (Essen, 2005). A study done by Knoster, 2008 suggested that follow up programs for the poor quality of life has to be incorporated. Play therapy is an effective intervention to prepare for painful procedures (Zereapour, 2009). School program conducted in hospital would help children to follow school program in their absence from school (Kapelaki, 2003). Hence, the researcher took the above interventions to promote the quality of life of children with cancer.

# SUMMARY AND CONCLUSION

This chapter summarizes the major findings, limitations, implications in the field of nursing education, nursing practice, nursing research and recommendations.

This study is intended to promote the quality of life among children with cancer. The study design was quasi experimental one group pretest – post test design. The data was collected for a period of thirty days at pediatric oncology ward, Sri Ramakrishna Hospital, Coimbatore. The study was conducted with 16 children. Activity based learning and play therapy were administered to promote quality of life. Quality of life was assessed using modified pediatric quality of life inventory child report and parent report.

## 6.1. MAJOR FINDINGS OF THE STUDY

1. The demographic data revealed that a maximum number of respondents i.e., 9 (57%) were in adolescent group.
2. The demographic data revealed that out of 16 children, 10 (62%) were boys.
3. The nutritional status of children revealed that 6 (38%) children had first degree malnutrition, 4 (25%) children had II & III degree malnutrition respectively and 2 (12%) children were in normal nutritional status according to Gomez classification.
4. The results revealed that 13 (82%) children were diagnosed with acute lymphoblastic leukemia.
5. The post test scores revealed that 15 (94%) children had good quality of life, 1 (6%) had poor quality of life and 14 (88%) mothers reported good quality of

life. 1 (6%) reported substantial and 1 (6%) mother reported discrete quality of life for their children.

6. The results revealed that there is a significant improvement in quality of life after intervention.

## 6.2. LIMITATIONS

1. The study was conducted on less number of children.
2. The study was conducted for a minimum period which limits the generalization.
3. No structured procedure was followed in implementing the interventions that limits the internal validity.

## 6.3. RECOMMENDATIONS

1. The intervention can be reinforced as a regular practice.
2. Activity based learning can be structured according to the age group of children.
3. Specific plays can be structured for children undergoing various treatment modalities.
4. Similar interventions can be developed as a mechanism to enhance the quality of life.
5. Similar study can be conducted with large group of children.
6. Similar study can be replicated in other settings.

## 6.4. SUGGESTIONS

1. A separate area other than play area can be provided for activity based learning.
2. Non governmental organization can also be involved in providing activity based learning.

## 6.5. NURSING IMPLICATIONS

### 6.5.1. Nursing Education

Activity based learning and play therapy are found to be effective. Duration of hospitalization of children with cancer is much higher than the other disease conditions. Hence, this leads to loss of school education, infections, parental anxiety and repeated hospitalizations. The nurse educator may concentrate on enhancing the quality of life though such research evidences. Thus, it is appropriate to incorporate importance of activity based learning along with play therapy into nursing curriculum.

### 6.5.2. Nursing Administration

The children with cancer are spending more days in hospital and they have repeated hospitalization. The nurse administrator can draw written policies on activity based learning and play therapy and it can be scheduled as a routine to improve quality of life and can make it mandatory.

### 6.5.3. Nursing Practice

The nurse working in the oncology unit should be trained to administer activity based learning and play therapy, there by it enhances the skill and can follow as a routine practice to promote quality of life and can bring out positive physical and psychological responses to adjust with long term disease process.

### 6.5.4. Nursing Research

The nursing research intended to offer up to date suggestions in implementing the activity based learning and play therapy as one of the evidence based nursing intervention to promote quality of life of children with cancer. This can be practiced in different settings.

## 6.6. CONCLUSION

Cancer is one of the leading causes of death. The children with cancer are spending long periods in hospital. They can report poor quality of life because of various treatments, absence from school and monotonous play. Play therapy and activity based learning can be administered to children with cancer by staff nurse, parent or a nursing student as it does not need any specific training. This can serve as a best method to improve the quality of life of children with cancer.

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From
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Through
**The Principal,**
College of Nursing,
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Coimbatore -44.

To
Prof. Mahalakshmi,
Dept. of Pediatric Nursing
KMCH college of Nursing

Sub: Requisition for tool Validation –reg.

Respected Sir,

I have selected a project work topic entitled, "**Promotion of quality of life among children with cancer at Sri Ramakrishna Hospital, Coimbatore"** for the requirement of M.Sc Nsg Degree, the following tools are tend to be used. Hence, I request you to kindly give valuable suggestion and necessary modification in the same.

Thanking you,

Yours faithfully,

PRINCIPAL
College of Nursing
Sri Ramakrishna Institute of Paramedical Sciences
Coimbatore - 641 044.

(Phebe M. Thomas)

N.B. 3/t/w.

## FORMAT FOR CONTENT VALIDITY

Name of the expert :

Address :

Total content for the tool : Adequate/ Inadequate

Kindly validate each tool and tick wherever applicable.

| Sl. No. | No. of tool selection | Strongly agree | Agree | Need modification | Remarks |
|---|---|---|---|---|---|
| 1. | Section – 1 | | | | |
| 2. | Section – 2 | | | | |
| 3. | Section – 3 | | | | |
| 4. | Section – 4 | | | | |
| 5. | Section – 5 | | | | |

Date: 3/6/20

N.B.

Signature of the Expert

## FORMAT FOR CONTENT VALIDITY

Name of the expert :

Address :

Total content for the tool : Adequate/ Inadequate

Kindly validate each tool and tick wherever applicable.

| Sl. No. | No. of tool selection | Strongly agree | Agree | Need modification | Remarks |
|---|---|---|---|---|---|
| 1. | Section – 1 | | ✓ | | |
| 2. | Section – 2 | | | | |
| 3. | Section – 3 | | | | |
| 4. | Section – 4 | | | | |
| 5. | Section – 5 | | | | |

**Date:**

**Signature of the Expert**

From
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Through
**The Principal,**
College of Nursing,
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Coimbatore -44.

To
Dr. P. Guhan, MD, DMRT, DNB, DM
Consultant Medical oncologist
Sri Ramakrishna Institute of Oncology & Research.

Sub: Requisition for tool Validation –reg.

Respected Sir,

I have selected a project work topic entitled, "**Promotion of quality of life among children with cancer at Sri Ramakrishna Hospital, Coimbatore"** for the requirement of M.Sc Nsg Degree, the following tools are tend to be used. Hence, I request you to kindly give valuable suggestion and necessary modification in the same.

Thanking you,

PRINCIPAL
College of Nursing,
Sri Ramakrishna Institute of Paramedical Sciences
Coimbatore - 641 044.

Yours faithfully,

(Phebe M. Thomas)

**FORMAT FOR CONTENT VALIDITY**

Name of the expert : P. SHANTHI

Address : Vice principal
Institute of Nursing
G.K.N.M. Hospital
Coimbatore

Total content for the tool : ✓ Adequate/ Inadequate

Kindly validate each tool and tick wherever applicable.

| Sl. No. | No. of tool selection | Strongly agree | Agree | Need modification | Remarks |
|---|---|---|---|---|---|
| 1. | Section – 1 | | ✓ | | |
| 2. | Section – 2 | | ✓ | | |
| 3. | Section – 3 | | ✓ | | |
| 4. | Section – 4 | | ✓ | | |
| 5. | Section – 5 | | ✓ | | |

Date: 2/6/10

P. Shanthi
Signature of the Expert

# ANNEXURE - I

**Paired 't' test**

To test the hypothesis, 't' test was applied to findout the significant difference between before and after intervention.

$$t = \frac{\bar{d}}{\frac{SD}{\sqrt{n}}}$$

$$SD = \sqrt{\frac{\sum\left(d-\bar{d}\right)^2}{n-1}}$$

$\bar{d}$ = Mean of difference between pretest and post test score

SD = Standard deviation of the pre-test and post test score

n = Number of samples

# APPENDIX – I

## LETTER SEEKING PERMISSION FOR CONDUCTION OF RESEARCH STUDY

From

Ms. Phebe M. Thomas,
M.Sc Nursing 1st year,
Sri Ramakrishna College Of Nursing,
Coimbatore.

To

Dr. P. Guhan, MD, DMRT, DNB, DM,
Director & Consultant, Medical Oncologist,
Sri Ramakrishna Institute Of Oncology & Research,
Coimbatore.

Through

The Principal,
College Of Nursing,
Sri Ramakrishna College Of Nursing,
Coimbatore.

Respected Sir,

Subject: Letter Requesting Permission for Conducting the Research Study.

I Phebe M.Thomas doing my M.Sc Nursing 1st year in Sri Ramakrishna College Of Nursing. As a part of my curriculum requirement under Dr. M.G.R Medical University to conduct a research ,I have been allotted for the research study on "Holistic Approach To Promote Quality Of Life Among Children With Cancer at Sri Ramakrishna Hospital, Coimbatore."

I hereby requesting you to permit me for conducting the research among the children with cancer in pediatric oncology unit during the month of April 2010 and June 2010 in your well established hospital. I assure you that, I will adhere to the hospital rules and regulations. So kindly do the needful for me.

Thanking You,

PRINCIPAL
College of Nursing,
Sri Ramakrishna Institute of Paramedical Sciences
Coimbatore - 641 044.

Coimbatore,
Date: 5.12.2009

Yours Sincerely,

( Phebe M. Thomas )

# APPENDIX - II

From
**Phebe M Thomas,**
M.Sc Nursing II year,
College of Nursing,
Sri Ramakrishna Institute of Paramedical Sciences,
Coimbatore -44.

Through
**The Principal,**
College of Nursing,
Sri Ramakrishna Institute of Paramedical Sciences,
Coimbatore -44.

To
Prof. Shanthi,
Vice Principal,
GKNM College of nursing

Sub: Requisition for tool Validation –reg.

Respected ~~Sir~~, madam

I have selected a project work topic entitled, "**Promotion of quality of life among children with cancer at Sri Ramakrishna Hospital, Coimbatore"** for the requirement of M.Sc Nsg Degree, the following tools are tend to be used. Hence, I request you to kindly give valuable suggestion and necessary modification in the same.

Thanking you,

Yours faithfully,

(Phebe M. Thomas)

PRINCIPAL
College of Nursing,
Sri Ramakrishna Institute of Paramedical Sciences
Coimbatore - 641 044

# APPENDIX - III

## TOOL NO. 1

### I. DEMOGRAPHIC DATA OF CHILD

Sample Number :

Age :

Sex :

Education status :

Standard last studied :

Medium of instruction:

Leave/drop out :

Developmental milestones : Appropriate to age / not

Nutrition status

Height :

Weight :

Degree of malnutrition :

### II. FAMILY PROFILE

| FATHER | | MOTHER | |
|---|---|---|---|
| Age | : | Age | : |
| Education | : | Education | : |
| Occupation | : | Occupation | : |
| Income | : | Income | : |

Family History of Cancer :

### III. MEDICAL HISTORY OF CHILD

Diagnosis :

Date of diagnosis :

Date of admission :

Duration of illness :

Treatment

- Surgery :
- Chemotherapy – phase :
- Radiation therapy :
- Others :

Reason for present admission :

# TOOL NO. 2
# MODIFIED PEDIATRIC QUALITY OF LIFE – CANCER MODULE CHILD REPORT

| Sl. No. | | Never | Some times | Always |
|---|---|---|---|---|
| | | 0 | 2 | 4 |
| | **Pain and hurt** | | | |
| 1. | I ache or hurt in my joints or muscular | | | |
| 2. | I hurt a lot | | | |
| | **Worry** | | | |
| 1. | I worry about side effects from medical treatments | | | |
| 2. | I worry about whether or not my medical treatments are working | | | |
| 3. | I have worry long term hospitalization | | | |
| 4. | I have feeling of hopelessness | | | |
| | **Cognitive problems** | | | |
| 1. | It is hard for me to figure out what to do when something bothers me | | | |
| 2. | I have trouble solving math problems | | | |
| 3. | I have trouble writing school papers | | | |
| 4. | It is hard for me to pay attention | | | |
| 5. | It is hard for me to remembers what I read | | | |
| 6. | I feel like going to school | | | |
| | **Socialization** | | | |
| 1. | I am quiet awkward in social situations. | | | |
| 2. | I am not feeling comfortable with other people. | | | |
| 3. | I find it different to make friends easily. | | | |
| 4. | I feel difficult to get along with other people. | | | |
| | **Self confidence** | | | |
| 1. | I often feel unwanted | | | |
| 2. | I feel no one pays attention to me. | | | |

| | | | | |
|---|---|---|---|---|
| 3. | I feel I am not worthy to be loved. | | | |
| 4. | I feel I cannot handle any situations. | | | |
| | **Perceived Physical appearance** | | | |
| 1. | I feel I am not good looking | | | |
| 2. | I don't like other people to see my scars | | | |
| 3. | I am embarrassed when others see me. | | | |
| | **Communication** | | | |
| 1. | It is hard for me to tell the doctors and nurses how I feel. | | | |
| 2. | It is hard for me to ask the doctors and nurses questions | | | |
| 3. | It is easy for me to explain my illness to other people. | | | |
| | **Play** | | | |
| 1. | I am limited in pursuing hobbies or leisure time activities | | | |
| 2. | I have limited opportunities to play on my interest | | | |
| 3. | I always need assistance with play | | | |
| 4. | My play is limited to very passive activities | | | |
| 5. | I am getting tired very soon. | | | |

0 – 25 = Good

26 – 50 = Substantial

51 – 75 = Average

76 – 100 = Discrete

101 – 124 = Poor

# TOOL NO. 3

## MODIFIED PEDIATRIC QUALITY OF LIFE – CANCER MODULE PARENT REPORT

| Sl. No. | | Never | Some times | Always |
|---|---|---|---|---|
| | | 0 | 2 | 4 |
| | **Pain and hurt** | | | |
| 1. | Pain in joints or muscles. | | | |
| 2. | Having a lot pain. | | | |
| | **Worry** | | | |
| 1. | Worrying about side effects of medical treatments. | | | |
| 2. | Worrying about whether or not medical treatments are working. | | | |
| 3. | Worry about long term hospitalization | | | |
| 4. | Having feeling of hopelessness. | | | |
| | **Cognitive problems** | | | |
| 1. | Difficulty in figuring out what to do when something bothers himself. | | | |
| 2. | Difficulty in working with numbers or doing math. | | | |
| 3. | Difficulty paying attention to things. | | | |
| 4. | Difficulty in remembering what is read to him/her. | | | |
| 5. | Having trouble in writing school papers | | | |
| 6. | Feel like going to school. | | | |
| | **Socialization** | | | |
| 1. | Is quiet awkward in social situations. | | | |
| 2. | Is not comfortable with other people. | | | |
| 3. | Is finding difficulty in making friends. | | | |
| 4. | Is finding in getting along with other people. | | | |
| | **Self confidence** | | | |
| 1. | Has a feeling of unwanted | | | |

| | | | | |
|---|---|---|---|---|
| 2. | Feels that no one pays attention to him/her. | | | |
| 3. | Feels he/she is not worthy to be loved. | | | |
| 4. | Feels he/she cannot handle any situations. | | | |
| | **Perceived Physical appearance** | | | |
| 1. | Feels he/she is not good looking | | | |
| 2. | Does not like other people to seen his/her scars. | | | |
| 3. | Being embarrassed about others seeing his/her body. | | | |
| | **Communication** | | | |
| 1. | Difficulty in telling the doctors and nurses how he/she feels. | | | |
| 2. | Difficulty in asking the doctors or nurses questions | | | |
| 3. | Difficulty in explaining his/her illness to other people. | | | |
| | **Play** | | | |
| 1. | Has limited hobbies or leisure time activities. | | | |
| 2. | Has limited opportunities to play on interest | | | |
| 3. | Always need assistance with play | | | |
| 4. | Play is limited to passive activities | | | |
| 5. | Is getting tired very soon. | | | |

0 – 25 = Good

26 – 50 = Substantial

51 – 75 = Average

76 – 100 = Discrete

101 – 124 = Poor

**Tool No. 4**
**Module for Play therapy**

| | **Preschoolers (5 & 6 years)** | **School age (6-12 years)** | **Adolescents (13 -18 years)** |
|---|---|---|---|
| Gross motor play | ❖ **Catching ball**<br>• Make the children to sit in a round.<br>• Give ball to one child<br>• Ask the child to pass the ball to others.<br>• Who ever miss the catch is out.<br>• Final person is the winner.<br>❖ **London Bridge**<br>• Make the children to stand in a circle<br>• Sing the song 'London bridge is falling down'<br>• By the end of song the children have to assume various poses.<br>• Who ever cannot make it, they are out of the game.<br>Final person is the winner.<br>❖ **Card game**<br>• Make a number of cards in to four sets with names of flowers<br>Eg: rose, Lilly, jasmine and lotus and assign place for each flower. Guide away the cards to children play a music, when music stops the children with names of each flower should go to their places. | ❖ **Hide and seek**<br>• Hide an object in the ward.<br>• Make the child to find out.<br>(have the child name places for looking, if unable to got out of the bed).<br>❖ **Catching ball**<br>• Make the children to sit in a round.<br>• Give ball to one child<br>• Ask the child to pass the ball to others.<br>• Who ever miss the catch is out.<br>• Final person is the winner.<br>❖ **Card game**<br>• Make a number of cards in to four sets with names of flowers<br>Eg: rose, Lilly, jasmine and lotus and assign place for each flower. Guide away the cards to children play a music, when music stops the children with names of each flower should go to their places. | ❖ **Hand ball**<br>• Have the child throw and catch the ball.<br>❖ **Catching ball**<br>• Make the children to sit in a round.<br>• Give ball to one child<br>• Ask the child to pass the ball to others.<br>• Who ever miss the catch is out.<br>• Final person is the winner.<br>❖ **Card game**<br>• Make a number of cards in to four sets with names of flowers<br>Eg: rose, Lilly, jasmine and lotus and assign place for each flower. Guide away the cards to children play a music, when music stops the children with names of each flower should go to their places. |

| | | | |
|---|---|---|---|
| Fine Motor | • **Building blocks**<br>- Make children comfortable in bed<br>- Provide a set of building blocks<br>- Instruct them to make house, train or any other shape with it.<br>• **Colouring book**<br>- Provide colouring book<br>- Colour pencils and crayons are given<br>- Encourage to given colour. | • **Drawing**<br>- Allow the child to sit comfortably<br>- Provide paper, pencil, eraser, colour pencils or crayons.<br>- Encourage to draw pictures and colour them accordingly.<br>• **Colouring book**<br>- Provide colouring book<br>- Colour pencils and crayons are given<br>- Encourage to given colour<br>• **Carom board**<br>- Place the carom board on a flat surface.<br>- Make the children to sit on 4 sides.<br>- Instruct about play. There are 3colours of coins. Red-5 points, white-2 points and black – 1 point.<br>- Who so ever is acquiring any one coin can try again and he/she who gets the red coin should get one more to avoid loosing it.<br>- Everyone should get chance for strike. | • **Clay moulding**<br>- Make the child comfortable<br>- Provide coloured clay to child<br>- Encourage child to mould the clay as on his/her imagination.<br>- Clay can be reused.<br>• **Drawing**<br>- Allow the child to sit comfortably<br>- Provide paper, pencil, eraser, colour pencils or crayons.<br>- Encourage to draw pictures and colour them accordingly.<br>• **Art on broom stick**<br>Things needed are<br>- Broom stick<br>- Adhesive<br>- Blade<br>- Black chart paper<br>- Scissors<br>- Pencil, eraser and sharpener<br>• **Greeting card making**<br>Things needed are<br>- Chart<br>- Colour pencils<br>- Pencil<br>- Eraser |

| | | | |
|---|---|---|---|
| | | - Who ever is scoring more with red coin wins the game<br>• **Snake and ladder**<br>- A group of 4 children are made comfortably beside the board.<br>- One can start game by putting the coin and proceed.<br>- Everyone should get chance to play in rotation.<br>- Who ever meet the ladder in board can proceed as the instruction and whoever meets with snake should go back.<br>- Whoever meets the final point at first will win the game | - Scissors<br>• **Carom board**<br>- Place the carom board on a flat surface.<br>- Make the children to sit on 4 sides.<br>- Instruct about play. There are 3colours of coins. Red-5 points, white-2 points and black – 1 point.<br>- Who so ever is acquiring any one coin can try again and he/she who gets the red coin should get one more to avoid loosing it.<br>- Everyone should get chance for strike.<br>- Who ever is scoring more with red coin wins the game |

| | | | |
|---|---|---|---|
| Cognitive | • **A to Z IQ puzzle**<br>- Bring 2 or 3 children together<br>- Give them A to Z IQ puzzle<br>- Encourage to arrange it in order.<br>• **Picture completion**<br>- Draw a picture of a dog.<br>- Ask the child to close eyes<br>- Add an additional feature to the dog<br>- Ask the child to guess the added part<br>- Repeat the play<br>• **Puzzles**<br>- Cut out a picture from a magazine<br>- Cut out that into various pieces.<br>- Ask the child to rejoin it.<br>❖ Identify the objects<br>- See the picture<br>- Speak out the word/ name of the object aloud<br>- Pick up word form options.<br>Eg: - Sun, star, moon, flower<br>• **Odd One Out Quiz**<br>- Make the children to sit comfortably.<br>- Ask anyone of the child to pick out the odd one from given | • **Word Play**<br>- Ask 2 children to play.<br>- Provide them a paper with number of columns.<br>- Ask the children to fillup each column by writing letters to create new words.<br>- Children can score more according to the number of letters in the word.<br>• **Vegetables and fruits game**<br>- Make the children to sit in a round.<br>- The play leader continuously should say like fruits, vegetables.<br>- At one point she should stop and tell any of the child and say fruit, then the child should tell the name of a fruit.<br>- And the play can be continued till one child is left.<br>• **Telepathy**<br>- Make the children stand in a line<br>- Tell a sentence to the first child.<br>- The child has to pass the sentence to second, to third and | • **Word Play**<br>- Ask 2 children to play.<br>- Provide them a paper with number of columns.<br>- Ask the children to fillup each column by writing letters to create new words.<br>- Children can score more according to the number of letters in the word.<br>❖ **General Knowledge Quiz**<br>• Make the children in to two groups.<br>• Name them as ‘Group A&B’<br>• Ask questions to groups<br>• Direct correct answers get 10 points and passed questions get 5 points<br>• Whichever team gets more points wins.<br>Eg: Who is the first prime minister of India?<br>Which is the capital of the USA?<br>• **Place game**<br>- Make 3 or 4 children sit together.<br>- Ask the children to write the names of place starts with a |

<table>
<tr>
<td></td>
<td>objects Eg. Chair, table, stool, knife.<br>❖ Part to part game<br>• Make the children to sit in a circle. Instruct them to as command<br>Eg. Children should turn each other.<br>• Tell finger- to finger- children should touch the friend's finger.<br>• Head to head<br>• Knee to knee<br>❖ Big and small game<br>• Every time when the name oft eh animal is told the child has to stretch the arm out and bring together to show big or small<br>Eg; Elephant, ant<br>❖ In and out game<br>Take a box and many things like book, pen, pencil, eraser, ball, ribbon, stick etc. And encourage the child to follow instructions<br>Eg: put the pen in the box put the pencil out of the box</td>
<td>so on.<br>- Finally, the child at last should tell the sentence loudly.<br>- Check whether it is right, if wrong find out who did it and is out from game.<br>❖ Memory game<br>Let the child look at a given set of pictures and ask the child to tell the names of those things after a minute.<br>❖ Find the word<br>A number of words will be written in columns. The child has to find out each word and mark it.</td>
<td>particular letter.<br>- Whoever is writing more number 4 places will win the game.<br>Eg: 'I' India, Indonesia etc.<br>• Letter game<br>- Make the children into group of 2.<br>- Provide them with paper and pen.<br>- Encourage them to write names of people, place, object, vegetables etc. starting with same letter.<br>Eg: 'B'<br><table><tr><td>Name</td><td>Place</td><td>Object</td><td>Vegetable</td></tr><tr><td>Bala</td><td>Beijing</td><td>Bench</td><td>Bitter guard</td></tr></table>• Cross word Puzzle<br>The child has to answer the questions in the given columns to get the full columns filled.</td>
</tr>
<tr>
<td>Therapeutic play</td>
<td>- Give a doll to the child, allow the child to ventilate his feelings by manipulating it.<br>- Give a piece of paper and pencil</td>
<td>- Allow the child to make a list of procedures or experiences they like or dislike</td>
<td>- Allow the child to make a list of procedures or experiences they like or dislike</td>
</tr>
</table>

| | | | |
|---|---|---|---|
| | to the child and allow to draw. | | |
| Dramatic play | - Make the child to pretend like a police man, or teachers, father or mother | - Make the child to act like a doctor or nurse is taking care of him | - Help the children to expand on a theme and make a story and act out<br>Eg. Family roles |
| Creative play | | | **Art from waste**<br>- Encourage the child to make any object from used IV bottles or papers. |
| Communication | ❖ **Looking at picture**<br>- Provide colourful pictures to children.<br>- Allow them to look into it for some time.<br>- Ask them to communicate what they have seen in it. | **Story making**<br>- Provide colourful pictures to children.<br>- Allow them to make a story on the basis of the pictures | - Encourage the child to draw any picture of his interest and allow him to explain about it. |
| Socialization | | ❖ **Mini Cricket**<br>- Provide the child with in a book with numbered pages.<br>- Ask the child to open any one page of book<br>- If the page number ends with 2 (eg. 102) the child will get 2 runs, if '4', 4 runs and 6, six runs. If '0' comes at last (1g: 100) he is out. | • **Performance play**<br>- Make all children to stand in a circle.<br>- A small box with paper cuttings containing various activities are passed as music goes on.<br>- When the music stops, the child with box should pick up one paper and perform activity |

| | | | |
|---|---|---|---|
| | | - Two children can play this. | in it. Eg. Sing a song. |

# TOOL NO. 5

# MODULE FOR ACTIVITY BASED LEARNING

- In activity based learning, the present intervention is going to concentrate on only one subject, English.
- The child has to complete each milestone according to the activity based learning.
- Milestone represents the completion of logos. Logo is a set of cards of same type. For. eg. Alphabets. Each milestone has a number of logos in it. Each subject has different number of milestones in it.
- When the child is completing all logos in a milestone, the child can proceed to next milestones. In English first standard and has 12 milestones, second has 12, third has 12 and fourth has 14 milestones in it.
- The Cards in activity based learning are classified with colours.
- Red coloured boarder shows the basic level or first standard cards, green second, blue third and yellow fourth standard cards.
- When the child is completing the fourth standard cards, he/she can proceed to higher order works like, developing story from a picture, story telling, letter writing, etc.

**ACTIVITIES FOR PRESCHOOLERS**

- Alphabets - 4 days
- Numbers - 3 days
- Words - 5 days
- Mark the odd one - 3 days
- Rhyme time - 4 days
- Copying - 3 days
- Parts of body - 3 days

**School age children**

- Words - 3 days
- Sentence making - 3 days
- Informal conversation - 3 days
- Picture introduction - 3 days
- Parts of body and uses/functions - 2 days
- Fill in the blanks - 2 days
- Opposites - 2 days
- Colour talk - 1 days
- Weather talk - 1 days
- Picture talk - 1 days
- Listening - 2 days
- Reading - 2 days

**Adolescents**

- Informal - 3 days
- Formal conversation - 5 days
- Story telling - 3 days
- Story developing - 4 days
- Letter writing - 4 days
- Recreation - 3 days
- Reading - 3 days

Above these are the plan for one month. When the child is completing the recommended activities as per the plan, it is like completing the milestone of each class.

# APPENDIX - V

## CERTIFICATE OF TAMIL EDITING

## TO WHOMSOEVER IT MAY CONCERN

This is to certify that the dissertation, **"Promotion of Quality of Life among Children with Cancer at Sri Ramakrishna Hospital, Coimbatore"** done by **Phebe M. Thomas** II year M.Sc Nursing, College of Nursing, Sri Ramakrishna Institute of Paramedical Sciences, Coimbatore, has been edited for Tamil language appropriateness.

Name : சுரேந்திரன். கு M.A.M.PHIL

Designation : உதவிப் பேராசிரியர்

Name of the Institution : ஆர். வி. எஸ். கலை அறிவியல் கல்லூரி (தன்னாட்சி)

Signature :

DEPARTMENT OF TAMIL
Sulur
Coimbatore
641 402
(RVSCAS AUTONOMOUS)

## மாற்றி அமைக்கப்பட்ட குழந்தைகள் நல வாழ்க்கைத் தரம் புற்றுநோய் குறிப்பேடு – பெற்றோர் அறிக்கை

| வ. எண். | | எப்போதும் இல்லை | எப்போதாவது | எப்போதுமே |
|---|---|---|---|---|
| | **வலி மற்றும் காயம்** | | | |
| 1 | மூட்டுகளிலும், தசைகளிலும் வலி. | | | |
| 2 | அதிகமான வலி இருக்கிறது. | | | |
| | **கவலை** | | | |
| 1 | மருத்துவ சிசிச்சை காரணமாக பக்க விளைவுகள் குறித்து கவலைப்படுகிறேன். | | | |
| 2 | மருத்துவ சிகிச்சை செயல்படுகிறதா இல்லையா என்பது குறித்து கவலை ஏற்படுகிறது. | | | |
| 3 | புற்றுநோய் மீண்டும் ஏற்படுமோ என்று கவலைப்படுகிறேன். | | | |
| 4 | எந்தவிதமான உதவியும் இல்லை என்று உணர்கிறேன். | | | |
| | **சமாளிக்க வேண்டிய பிரச்சனைகள்** | | | |
| 1 | ஆவனை / அவளை மிகவும் பாதிக்கும் ஏதோ ஒரு காரியத்தில் என்ன செய்வது என்று கண்டுபிடிப்பது கடினமாக இருக்கிறது. | | | |
| 2 | கணித பாடத்தில் எண்கள், கணக்கு செய்வதில் கஷ்டமாக உள்ளது. | | | |
| 3 | கவனம் செலுத்துவதில் கஷ்டம் உண்டு. | | | |
| 4 | அவனுக்கு / அவளுக்கு படித்துக் கொடுத்ததை அவன் / அவள் ஞாபகத்தில் வைத்துக் கொள்ள கஷ்டமாக இருக்கிறது. | | | |
| 5 | பள்ளிக்கூட பாடங்களை எழுதுவதில் கடினமாக இருக்கிறது. | | | |
| 6. | பிரச்சனைகளை சமாளிப்பது எளிதானதாக இருப்பதில்லை | | | |

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| | **சமூக ஈடுபாடு** | | | |
| 1. | சமூக சூழ்நிலைகளில் கொஞ்சம் ஒதுங்கியே இருக்கிறது. | | | |
| 2. | மற்றவர்களுடன் பழகுவதில் மிகுந்த தயக்கம் உண்டு. | | | |
| 3. | நண்பர்களை ஏற்படுத்துவது மிகவும் கடினமாயிருந்தது. | | | |
| 4. | மற்றவர்களுடன் இசைந்து போவது மிகவும் கடினமாயிருக்கிறது. | | | |
| | **சுய நம்பிக்கை** | | | |
| 1. | தேவையில்லாத கவலைகள் ஏற்படுகின்றன. | | | |
| 2. | ஆவனை /அவளை கவனிப்பதற்கு ஒருவரும் இல்லை என்று உணர்வு உண்டு. | | | |
| 3. | அன்பு செலுத்தப்பட்ட தனக்கு தகுதி இல்லை என்ற உணர்வு அவனுக்கு /அவளுக்கு இருக்கிறது. | | | |
| 4. | அவன் /அவள் தன்னால் எந்த ஒரு சூழ்நிலையையும் சமாளிக்க முடியாது என்ற உணர்வு இருக்கிறது. | | | |
| | **உடல் தோற்றத்தைக் காண்பது** | | | |
| 1. | அவன் / அவள் தனக்கு நல்லதோர் தோற்றம் கிடையாது என்று உணர்வு உடையவராக இருக்கிறான், இருக்கிறாள் | | | |
| 2. | மற்றவர்கள் அவனுடைய / அவளுடைய தழும்புகளை பார்ப்பதை விரும்புவதில்லை. | | | |
| 3. | அவனுடைய /அவளுடைய தோற்றத்தை மற்றவர்கள் பார்ப்பது சங்கடத்தை ஏற்படுத்துகிறது. | | | |
| | **தகவல் பரிமாற்றம்** | | | |
| 1. | தான் உணர்வதை மருத்துவர் / செவிலியர் ஆகியோருடன் சொல்வதில் கஷ்டம் உண்டு. | | | |
| 2. | மருத்துவர் / செவிலியர் கேள்விகள் கேட்பதற்கு கஷ்டமாக இருக்கிறது. | | | |
| 3. | தனது நோயைப் பற்றி மற்றவர்களிடம் விளக்கம் சொல்வதில் கஷ்டம் உண்டு. | | | |

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| | **விளையாட்டு** | | | |
| 1. | குறைந்த அளவே பொழுது போக்கு, ஒய்வு நேர பயன்பாட்டு வாய்ப்புகள் இருக்கிறது. | | | |
| 2. | விருப்பம் போல் விளையாட சந்தர்ப்பங்கள் மிகவும் குறைவு. | | | |
| 3. | விளையாடுவதற்கு எப்போதும் உதவி தேவைப்படுகிறது. | | | |
| 4. | சகிப்புத் தன்மையுள்ள விளையாட்டுகள் கொஞ்சமாகத் தான் இருக்கின்றன. | | | |
| 5. | சீக்கிரமாக சோர்ந்து போகிறான்/ போகிறாள். | | | |

**மாற்றி அமைக்கப்பட்ட குழந்தைகள் நல வாழ்க்கைத் தரம் புற்றுநோய் குறிப்பேடு – குழந்தைகள் அறிக்கை**

| வ. எண். | | எப்போதும் இல்லை | எப்போதாவது | எப்போதுமே |
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| | **வலி மற்றும் காயம்** | | | |
| 1 | எனது மூட்டுகளிலும், தசைகளிலும் எனக்கு வலி அல்லது காயம் ஏற்படுகிறது. | | | |
| 2 | நான் அதிகமாக காயப்படுகிறேன். | | | |
| | **கவலை** | | | |
| 1 | மருத்துவ சிசிச்சை காரணமாக பக்க விளைவுகள் குறித்து நான் கவலைப்படுகிறேன். | | | |
| 2 | எனக்கு கொடுக்கப்படும் மருத்துவ சிகிச்சை செயல்படுகிறதா இல்லையா என்பது குறித்து எனக்கு கவலை ஏற்படுகிறது. | | | |
| 3 | புற்றுநோய் மறுபடியும் ஏற்பட்டுவிடுமோ அல்லது திரும்ப வருமோ என்று நான் கவலைப்படுகிறேன். | | | |
| 4 | எனக்கு எந்தவிதமான உதவியும் இல்லை என்று உணர்கிறேன். | | | |
| | **சமாளிக்க வேண்டிய பிரச்சனைகள்** | | | |
| 1 | என்னை ஏதாவது கவலைக்குள்ளாகும் போது என்ன செய்வது என்று கண்டுபிடிப்பது மிகவும் கடினமாக இருக்கிறது. | | | |
| 2 | எனது கணித பாடங்களை செய்வதில் மிகுந்த கஷ்டமாக உள்ளது. | | | |
| 3 | பள்ளி பாடங்களை எழுதுவதில் எனக்கு கஷ்டமாக இருக்கிறது. | | | |
| 4 | கவனம் செலுத்துவது கஷ்டமாக இருக்கிறது. | | | |
| 5 | நான் படிப்பதை நினைவில் வைத்திருப்பது மிகவும் கடினமாக இருக்கிறது. | | | |

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| 6. | பிரச்சனைகளை சமாளிப்பது எனக்கு எளிதாக இருப்பதில்லை | | | |
| | **சமூக ஈடுபாடு** | | | |
| 1. | சமூக சூழ்நிலைகளில் நான் கொஞ்சம் ஒதுங்கியே இருக்கிறேன். | | | |
| 2. | மற்றவர்களுடன் பழகுவதில் நான் தயக்கமடைகிறேன். | | | |
| 3. | நண்பர்களை ஏற்படுத்துவது எனக்கு எளிதாக இல்லை. அது மிகவும் கடினம் என்று நினைக்கிறேன். | | | |
| 4. | மற்றவர்களுடன் இசைந்து போவது எனக்கு மிகவும் கடினம் என்பதை உணர்கிறேன். | | | |
| | **சுய நம்பிக்கை** | | | |
| 1. | நான் தேவையற்றவரோ என்று அடிக்கடி உணர்கிறேன். | | | |
| 2. | என்னை யாரும் கவனிப்பதில்லை என்று உணர்கிறேன். | | | |
| 3. | என் மீது பிறர் அன்பு செலுத்த நான் தகுதியற்றவரோ என்று உணர்கிறேன். | | | |
| 4. | எந்த ஒரு சூழ்நிலையையும் என்னால் கையாள முடியாது என்று நான் உணர்கிறேன். | | | |
| | **உடல் தோற்றத்தைக் காண்பது** | | | |
| 1. | எனக்கு நல்ல உடல் தோற்றம் இல்லை என்று உணர்கிறேன். | | | |
| 2. | எனது தழும்புகளை மற்றவர்கள் பார்ப்பதை நான் விரும்புவதில்லை. | | | |
| 3. | மற்றவர்கள் என்னை பார்ப்பதற்கு நான் மிகவும் சங்கடப்படுகிறேன். | | | |
| | **தகவல் பரிமாற்றம்** | | | |
| 1. | நான் எப்படி உணர்கிறேன் என்பதை மருத்துவர்கள் மற்றும் செவிலியர்களுடன் சொல்வது எனக்கு மிகவும் கஷ்டமாக உண்டு. | | | |
| 2. | மருத்துவாகளிடமும், செவிலியர்களிடமும் கேள்விகள் கேட்பதற்கு எனக்கு மிகவும் கஷ்டமாக இருக்கிறது. | | | |
| 3. | மற்றவர்களிடம் எனது நோயைப் பற்றி விளக்குவது எனக்கு மிகவும் கஷ்டமாக உள்ளது. | | | |

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| | **விளையாட்டு** | | | |
| 1. | பொழுது போக்குகளிலும், ஓய்வு நேரங்களை பயன்படுத்தும் செயல்களிலும் எனது ஈடுபாடு மிகவும் குறைவாக உள்ளது. | | | |
| 2. | எனது விருப்பம் போல் விளையாடுவதற்கு சந்தர்ப்பங்கள் மிகவும் குறைவாக இருக்கின்றன. | | | |
| 3. | விளையாட்டில் எனக்கு எப்போதும் உதவி தேவையாக இருக்கின்றன. | | | |
| 4. | சகிப்புத் தன்மையுள்ள விளையாட்டுகள் எனக்கு கொஞ்சமாகத் தான் இருக்கின்றன. | | | |
| 5. | நான் சீக்கிரமாக சோர்ந்து போகிறேன் | | | |